

REMARKS

Claims 97-146 are pending in this application. By this Amendment, the specification and claims 97, 101, 135 and 136 are amended, and claims 144-146 are added. No new matter is added. Reconsideration of the application is respectfully requested.

Applicant appreciate the courtesies shown to Applicants' representative by Examiner Zanelli in the October 6, 2006 telephone interview. Applicants' separate record of the substance of the interview is incorporated into the following remarks.

I. Allowable Claims

Applicant notes with appreciation the indication of allowable subject matter in claims 99, 108, 110-119, 122-124, 126-129 and 132-134. These claims are not rewritten in independent form at this time because their base claim 97 is patentable as discussed below.

II. Information Disclosure Statement

The Examiner is requested to acknowledge the receipt and consideration of the references disclosed in the November 6, 2006 Information Disclosure Statement in the next Patent Office communication. Applicant respectfully submits that JP-A-2003-205517 (JP 517), which is cited in the Information Disclosure Statement, discloses that estimated information obtained by an estimated-information obtaining device on the basis of a detected vehicle state is utilized as wheel-state information in the event of a failure of a wheel-state detecting device to obtain the wheel state information. However, similar to Ernst as discussed in detail below, JP 517 fails to teach or suggest that the estimated-information obtaining device obtains the estimated information during the period between the two moments, as recited in claims 97, 135 and 136.

III. Formal Matter

The Office Action objects to Fig. 1. During the October 6, 2006 telephone interview, Examiner Zanelli indicated that reference numerals 12, 22, 28 and 62 should be identified

with labels in the drawing. However, Applicant respectfully submits that these elements are shown with labels in Figs. 2 and 3 and are described in the specification as well. For example, the receiver antenna 22 (as well as 20, 24 and 26), the air-pressure-information obtaining device 28, and wheel side sensor 62 (as well as 60, 64 and 66) are shown in Fig. 2. The wheel-side device 12 (as well as 10, 14 and 16) is described in the specification at, for example, page 52, lines 3-17. Labels FR, RL, FL and RR shown in Fig. 1 are well-known abbreviations for front right and left wheels and rear right and left wheels, as used in Fig. 1 of U.S. Patent No. 6,446,023 to Ernst as applied by the Office Action.

Therefore, one of ordinary skill in the art would have an understanding of the elements shown in the figures. Thus, Applicant respectfully submits that the drawings meet the requirements of the Patent Office and requests withdrawal of this objection.

The Office Action objects to the specification. The specification is amended to obviate the objection. Withdrawal of the objection is respectfully requested.

The Office Action objects to claim 135 for a typographical error. Claim 135 is amended to obviate the objection. Withdrawal of the objection is respectfully requested.

IV. Prior Art Rejections

The Office Action rejects claims 97, 98, 100-107, 109, 120, 121, 125, 130, 131 and 135-141 under 35 U.S.C. §102(b) over EP 1044829 A2 (corresponding to US Patent No. 6,446,023) to Ernst. This rejection is respectfully traversed.

Claims 97 and 135 recite, *inter alia*, that the estimated-information obtaining device obtains the estimated information during a period between a moment (t_1) of last reception of the wheel-side information by the body-side device from the wheel-side-information transmitting device, and a moment (t_2) which is the time interval (ΔT_1) after the moment of last reception. Claim 136 recites, *inter alia*, that the wire-transmission-dependent-information obtaining device obtains the wire-transmission-dependent information, during a

period between a moment of last reception of the first-detecting-device information by the remote-information receiving device, and a moment which is the time interval after the moment of last reception.

These features are shown in Fig. 4, for example.

As shown in Fig. 4, the estimated information or the wire-transmission-dependent information (indicated by "x") is obtained at four predetermined moments of calculation represented by $t_1 + \Delta T_2$, $t_1 + 2\Delta T_2$, $t_1 + 3\Delta T_2$, and $t_1 + 4\Delta T_2$, within the period $(t_1 - t_2)$ indicated above. In the flow chart of Fig. 5, a control flow to obtain the estimated information within the period as recited in claims 97, 135 and 136 is indicated by an affirmative decision (YES) in step S1, implementation of step S4, a negative decision (NO) in step S5 and implementation of steps S11 and S12. This control is advantageous in that, because the estimated information or the wire-transmission-dependent information obtained in the period as recited in claims 97, 135 and 136 is used as the wheel-state information or the vehicle-state information, the interval (ΔT_1) of transmission or reception of the wheel-side information or the first-detecting-device information can be made relatively long, so that the amount of electric energy required to transmit the wheel-side information or the first-detecting-device information can be reduced, whereby the service life of the battery provided to store the electric energy can be prolonged, as described in the specification at, for example, page 12, lines 12-25 and page 62, lines 1-13.

In the system disclosed in Ernst, on the other hand, the estimated information is obtained in step S104 of Fig. 2 of Ernst on the basis of outputs of wheel speed sensors 12a-12d, when the time "t," which has elapsed after the moment of last reception of wheel-side information $(P_1 - P_4)$, has exceeded the first time limit G_1 . The first limit value G_1 is applied to a second input of the comparator and is at least slightly greater than the transmission pause which is typically lines between the transmission of two data transmissions of a tire pressure

control device. See col. 3, lines 5-11; col. 7, lines 4-10 and 25-37; and col. 10, lines 43-48 of Ernst.

Ernst fails to teach or suggest the concept of obtaining the estimated information on the basis of outputs of the wheel speed sensors 12a-12d during the period between a moment of last reception of the wheel-side information by the body-side device from the wheel-side-information transmitting device, and a moment which is the time interval after said moment of last reception, as recited in claims 97 and 135, or obtaining the wire-transmission-dependent information, during a period between a moment of last reception of the first-detecting-device information by the remote-information receiving device, and a moment which is the time interval after the moment of last reception, as recited in claim 136. Ernst merely teaches obtaining the estimated information if the body-side device (10) has not received the wheel-side information (P_1 - P_4) for more than a predetermined time period after the moment of last reception of the wheel-side information. This operation to obtain the estimated information (in step 104 of Fig. 4 of Ernst) is similar to a control flow indicated, in the flow chart of Fig. 5 of the present application, by an affirmative decision (YES) in step S5, a negative decision (NO) in step S6, an affirmative decision (YES) in step S7, and implementation of steps S11 and S12.

Thus, Ernst does not teach or suggest the features recited in claims 97, 135 or 136 or the above-described advantage. Accordingly, claims 97, 135 and 136 are patentable over Ernst.

Claims 98, 100-107, 109, 120, 121, 125, 130, 131 and 137-141 are allowable at least for their dependence on allowable base claims, respectively, as well as for the additional features they recite. At least for these reasons, Applicant respectfully request withdrawal of the rejection.

The Office Action rejects claims 142 and 143 under 35 U.S.C. §103(a) over Ernst in view of U.S. Patent No. 6,671,609 to Nantz et al. (Nantz) and U.S. Patent No. 6,499,343 to Haas et al. (Haas). This rejection is respectfully traversed.

Nantz is applied for the teaching of utilizing low tire pressure determinations to actuate a drive control, and Haas is applied for the teaching of utilizing low tire pressure determinations to actuate tire pressure adjustment systems. Neither Nantz nor Haas overcome Ernst's deficiencies as discussed above with respect to claim 97. Thus, claims 142 and 143 are allowable at least for their dependence on claim 97, as well as for the additional features they recite.

In addition, the Office Action asserts that one of ordinary skill in the art would have found it obvious that the low pressure tire readings generated by Ernst could be used to control other systems which utilize tire pressure readings to control vehicle systems, such as Nantz and Haas. However, this statement is merely an end result from the combination and is not a proper motivation for one of ordinary skill in the art to combine these references. Moreover, as clearly stated at MPEP §2143.01(III), the mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. None of the applied references teach or suggest the desirability of the combination. Therefore, the Patent Office has not established a proper *prima facie* case of obviousness. Thus, this rejection is improper.

Therefore, withdrawal of the rejection is respectfully requested.

New claims 144 and 145 recite that the estimated-information obtaining device obtains the estimated information at at least two points of time during the period, and claim 146 recites that the wire-transmission-dependent-information obtaining device obtains the wire-transmission-dependent information at at least two points of time during the period.

These features are described in the specification at, for example, page 59, lines 9-17; page 60, lines 8-10; and page 62, lines 4-6, and shown in Figs. 4 and 5.

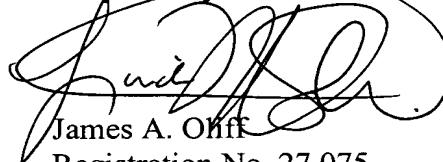
These claims are allowable at least for their dependence on claims 97, 135 and 136, respectively, as well as for the additional features they recite.

V. Conclusion

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of the application are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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Attachments:

Petition for Extension of Time
Amendment Transmittal

Date: January 8, 2007

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